

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

124  
**DETAILED DESCRIPTION OF THE INVENTION**

**IN THE CLAIMS:**

**Please cancel claims 1-47 inclusive without prejudice or disclaimer.**

**Please add the following new claims:**

Sub 17  
45  
--48. A protective device for protecting an interface means (2,3) of the type hereinbefore defined of a read and/or write unit of the type hereinbefore defined, the read and/or write unit comprising a receiving area for receiving a data carrier, the interface means (2,3) being located in or adjacent the receiving area for interfacing with the data carrier for reading from and/or writing to the data carrier, characterized in that the protective device (1,20,30) comprises a carrier means (5) for engaging in the receiving area of the read and/or write unit, and a protecting means (6) carried on the carrier means (5) for engaging the interface means (2,3) for protecting the interface means (2,3) when the carrier means (5) is engaged in the receiving area.

49. A protective device as claimed in Claim 48 characterized in that the protecting means (6) is located on the carrier means (5) at a position which when the carrier means (5) is located in the receiving area coincides with an inoperative position of the interface means (2,3), and/or a position at which the interface means expects to find directory and/or other data on a data carrier.

50. A protective device as claimed in Claim 48 characterized in that the protecting means (6) engages the interface means (2,3) with a portion of the interface means (3,7) nested into the protecting means (6), and preferably, the area of the protecting means (6) offered up to the interface means (2,3) is at least of area similar to the area of the portion (3,7) of the interface

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

Subst  
Inst  
means (2,3) to be nested into the protecting means (6), and advantageously, the area of the protecting means (6) offered up to the interface means (2,3) is greater than the area of the portion (3,7) of the interface means (2,3) to be nested into the protecting means (6), and ideally, the area of the protecting means (6) offered up to the interface means (2,3) is such that the protecting means (6) embraces a peripheral portion (7) extending around the portion (3) of the interface means (2,3) to be nested into the protecting means (6).

AS  
51. A protective device as claimed in claim 48 characterized in that the protecting means (6) is resilient, and preferably, the protecting means (6) comprises a plurality of fibres (15) extending from the carrier means (5) for engaging the interface means (2,3), and preferably, the fibres (15) of the protecting means (6) are flexible, and advantageously, the fibres (15) of the protective device (6) are resilient, and ideally, the fibres (15) of the protecting means (6) are provided in the form of a brush (6), and preferably, the fibres (15) of the protecting means (6) extend from a base member (14) mounted on the carrier means (5), and advantageously, a resilient mounting means (21) is provided for resiliently mounting the base member (14) of the protecting means (6) to the carrier means (5).

52. A protective device as claimed in claim 52 characterized in that the carrier means (5) defines a central axis (9) for in use coinciding with a rotational axis of a data carrier in the receiving area, and preferably, the carrier means (5) defines a carrier plane, and the fibres (15) of the protecting means (6) extend from the carrier means (5) at an angle to the carrier plane of less than 90°, and preferably, the fibres (15) of the protecting means (6) extend from the carrier means (5) at an angle to the carrier plane in the range of 20° to 80°. and advantageously, the

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

Sub 801  
Cont

fibres (15) of the protecting means (6) extend from the carrier means (5) at an angle to the carrier plane in the range of 50° to 80°, and advantageously, the fibres (15) of the protecting means (6) extend from the carrier means (5) in a direction circumferentially relative to the central axis (9) defined by the carrier means (5).

H5

53. A protective device as claimed in any of Claim 5 characterized in that the protecting means (6) extends circumferentially around the central axis (9) defined by the carrier means (5), and preferably, the protecting means (6) extends completely around the central axis (9) defined by the carrier means (5).

54. A protective device as claimed in Claim 52 characterized in that the protecting means (6) is spaced apart from the central axis (9) defined by the carrier means (5).

55. A protective device as claimed claim 48 characterized in that the protecting means (6) protects the interface means (2,3) from dirt and dust, and preferably, the protecting means (6) protects the interface means (2,3) from shock.

56. A protective device as claimed in claim 48 characterized in that an indicating means (12) is provided for indicating the direction in which the carrier means (5) is to be inserted in the receiving area of the read and/or write unit, and preferably, the indicating means (12) is provided on the carrier means (5), and preferably, the indicating means (12) facilitates alignment of the protecting means (6) with the interface means (2,3).

57. A protective device as claimed in claim 48 characterized in that the protecting means (6) is located on the carrier means (5) for cleaning the interface means (2,3) as the carrier means (5) is being inserted in the receiving area, and preferably, the protecting means (6) is

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

located on the carrier means (5) for cleaning the interface means (2,3) when the read/write unit is activated for reading or writing data, and the interface means (2,3) is being initially moved for identifying data.

58. A protective device as claimed in claim 48 characterized in that the carrier means (5) is provided for engaging in a disc receiving area of a disc drive read and/or write unit, and the protecting means (6) is provided for protecting a read and/or write head forming the interface means (2,3) of the read and/or write unit, and preferably, the protecting means (6) cleans the read and/or write head (2,3) of the disc drive read and/or write unit as the read and/or write head (2,3) is being initially moved for identifying data, and advantageously, the protecting means (6) cleans the read and/or write head of the disc drive read and/or write unit as the read and/or write head is being moved substantially perpendicularly relative to the carrier means (5) into and out of the protecting means (6).

59. A protective device as claimed in Claim 58 characterized in that the protecting means (6) is for protecting a read and/or write head provided by an optical head (2,3), and preferably, the protecting means (6) is for engaging a lens (3) of the read and/or write optical head (2), and advantageously, the protecting means (6) is for protecting a read and/or write head provided by a magnetic head (2,3).

60. A method for protecting an interface means (2,3) of the type hereinbefore defined of a read and/or write unit of the type hereinbefore defined in which the read and/or write unit comprises a receiving area for receiving a data carrier, and the interface means (2,3) is located in or adjacent the receiving area, the method comprising the steps of inserting a carrier means (5)

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

having a protecting means (6) mounted thereon into the receiving area of the read and/or write unit, and engaging the protecting means (6) with the interface means (2,3) when the carrier means (5) is engaged in the receiving area for protecting the interface means (2,3).

61. A method as claimed in Claim 60 characterized in that the protecting means (6) protects the interface means (2,3) from dirt and/or dust.

62. A method as claimed in Claim 60 characterized in that the protecting means (6) protects the interface means (2,3) from shock.

63. A method as claimed in Claim 60 characterized in that the protecting means (6) cleans the interface means (2,3) as the carrier means (5) is being inserted into the receiving area, and preferably, the protecting means (6) cleans the interface means (2,3) when the interface means (2,3) has been activated to identify data, and advantageously, the protecting means (6) cleans the interface means (2,3) when the interface means (2,3) is being initially moved perpendicularly relative to the carrier means (5) into and out of the protecting means (6) for identifying data.

64. A method for protecting an interface means (2,3) of the type hereinbefore defined of a read and/or write unit of the type hereinbefore defined in which the read and/or write unit comprises a receiving area for receiving a data carrier, and an interface means (2,3) is located in or adjacent the receiving area, the method comprising the steps of inserting the carrier means (5) of the protective device (1,20,30) as claimed in any of Claims 1 to 34 into the receiving area of the read and/or write unit, and engaging the protecting means (6) with the interface means (2,3)

Preliminary Amendment  
PCT/IE00/00084  
Attorney Docket Q67954

when the carrier means (5) is inserted in the receiving area for protecting the interface means (2,3).

65. A method as claimed in Claim 64 characterized in that the read and/or write unit is a disc drive read and/or write unit, and the interface means (2,3) is a read and/or write head, and preferably, the read and/or write head (2,3) is an optical head (2), and alternatively, the read and/or write head (2,3) is a magnetic head, and preferably, the method further comprises activating the read and/or write unit for causing the interface means (2,3) to cycle perpendicularly relative to a plane defined by the carrier means (5) for cycling the interface means into and out of the protecting means (6) for cleaning the interface means (2,3).

66. A cleaning device for protecting an interface means (2,3) of the type hereinbefore defined of a read and/or write unit of the type hereinbefore defined, the read and/or write unit comprising a receiving area for receiving a data carrier, the interface means (2,3) being located in or adjacent the receiving area for interfacing with the data carrier for reading from and/or writing to the data carrier, characterised in that the cleaning device (1,20,30) comprises a carrier means (5) for engaging in the receiving area of the read and/or write unit, and a cleaning means (6) carried on the carrier means (5) for alignment with the interface means (2,3) when the carrier means (5) is located in the receiving area so that movement of the interface means (2,3) when the read and/or write unit is activated for identifying data the interface means (2,3) is moved into and out of the cleaning means (6) for cleaning the interface means (2,3).

67. A method for cleaning an interface means (2,3) of the type hereinbefore defined of a read and/or write unit of the type hereinbefore defined in which the read and/or write unit